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A NEW SPECIES AND FIRST TRUE RECORD OF ISOMETOPINAE (HETEROPTERA: MIRIDAE) FROM MADAGASCAR

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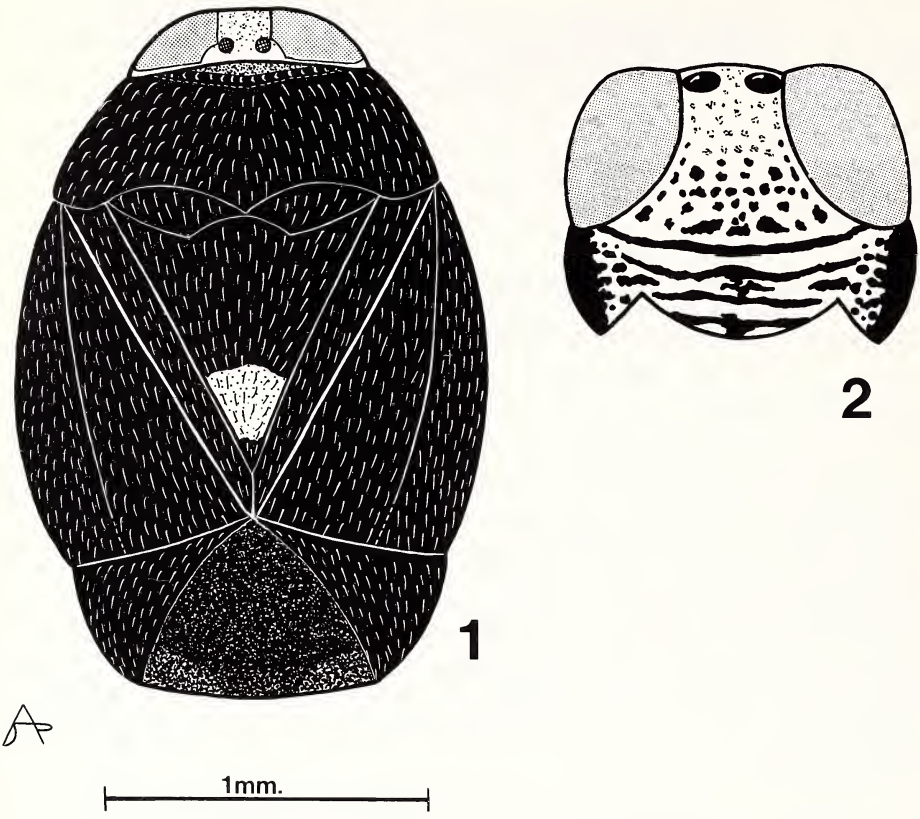
Abstract.—A new species of Isometopinae, *Magnocellus madagascariensis,* is described from the spiny forest of southwestern Madagascar. This is the first actual record of Isometopinae from the island. Comparison is made between this species and other members of *Magnocellus.* Habitat notes, a habitus illustration, and a distribution map are provided.

The mirid subfamily Isometopinae is widely distributed, occurring on all continents except Antarctica and on many large islands as well. Madagascar is the last major tropical land mass to lack records of this group. Carvalho (1952) described *Biliola microscopica* as an isometopine based on a single female from Mt. d'Ambre, at the far northern end of the island, but Carayon (1958) subsequently transferred *Biliola* to the Anthocoridae, so that once again there were no actual records of isometopines from Madagascar. The present paper, however, reports a true isometopine from the spiny forest in the dry southwest, a new species in the predominantly African genus *Magnocellus.* This fills a significant zoogeographical gap in the distribution of the subfamily, and provides another link between the fauna of western Madagascar and that of southern Africa.

Magnocellus madagascariensis, new species

Diagnosis. M. madagascariensis may be immediately separated from the other known species of *Magnocellus* by the coloration of the pronotum, scutellum and hemelytra, which are entirely black except for a small dark yellow spot at the apex of the scutellum (Fig. 1).

Description. Brachypterous female. Small, ovate, total length 2.00 mm, maximum width 1.45 mm (Fig. 1); general coloration black, with dark yellow spot at apex of scutellum; head with vertex and upper frons dark yellow, eyes and ocelli dark red, central frons below eyes black with 4 broad transverse creamy white striae (Fig. 2), expanded lateral portions of lower frons below eyes black, posterior margin of head behind eyes and along base of vertex narrowly creamy white. Antennal segment I black; antennal segment II pale yellowish, gradually darkened to black on basal and distal ¼, extreme tip also narrowly pale; antennal segment III pale yellowish, gradually darkening on apical ⅓; antennal segment IV uniformly pale yellow; all antennal segments clothed with fine, recumbent, pale setae. Pronotum black, very narrowly smoky translucent along lateral margins; scutellum black, with small spot at extreme apex dark yellow; hemelytra black, membrane fumate; pronotum, scutellum and hemelytra evenly clothed with semi-recumbent pallid pubescence, membrane lacking pubescence. Ventral surface black; rostrum with alternating broad black and translucent brown sections, giving striped appearance; legs predominantly dark brown to



Figs. 1, 2. *Magnocellus madagascariensis.* 1. Female holotype, dorsal habitus, antennae and legs omitted. 2. Female holotype, frontal view of head.

black except for following pale yellowish: fore trochanters, tarsi, and distal half of fore tibia, middle coxae, trochanters, tibia and tarsi, hind coxae, trochanters, tarsi and extreme base of hind tibia.

Head vertical, lateral portions of lower frons expanded beneath eyes with small V-shaped notches on lower margins to accommodate antennae (Fig. 2); ocelli large, prominent, touching inner margins of eyes, interocellar distance slightly less than twice the width of an ocellus; length of head 0.51 mm, width across lower margins of eyes 0.68 mm, interocular space 0.18 mm, width of ocellus 0.05 mm, interocellar width 0.08 mm; length of rostrum 1.17 mm, reaching beyond hind coxae. Antennae with segment II more slender than segment I, lengths of segments I–IV: 0.08 mm; 0.44 mm; 0.31 mm; 0.18 mm. Pronotum convex, with very narrow collar along anterior margin marked by line of small punctations, lateral margins arcuate and explanate, posterior margin biconcave with sharp angle medially, length (midline) 0.36 mm, width 1.12 mm; scutellum convex, length 0.78 mm, basal width 0.82 mm; hemelytra with clavus strongly narrowing posteriorly, length of claval commissure 0.11 mm, distance from apex of clavus to apex of cuneus 0.72 mm.

Fig. 3. Distribution of *Magnocellus* in Africa and Madagascar. Solid circle = *Magnocellus madagascariensis*; shaded area = range of remaining species in genus.

Discussion. In Slater and Schuh's (1969) key to the species of *Magnocellus, M. madagascariensis* n. sp. runs to *M. ghanaiensis* Smith, from which it may be separated by its dark fore and middle femora, and distinctive dorsal coloration. According to the above authors the dorsal coloration of *M. ghanaiensis* is predominantly light

brown, with a whitish band across the posterior margin of the pronotum, a mostly pale scutellum with limited dark markings basally and apically, and uniformly brown hemelytra. *M. madagascariensis* by contrast is almost entirely black, with contrasting dark yellow markings only on the vertex and the tip of the scutellum (Fig. 1). No other described species of *Magnocellus* shares this color pattern, most being either primarily brown or pale, or having white maculae on the hemelytra. In addition, *M. madagascariensis* also lacks fine pubescence on the membrane of the forewing, a character state shared with *M. ghanaiensis* Smith and *M. albifrons* Slater and Schuh.

The discovery of this species in Madagascar provides another link between the terrestrial heteropteran fauna of this island and that of southern Africa (Fig. 3). This is not surprising based on ecological considerations, since many of the dry deciduous forest and savannah formations of western Madagascar are quite similar in general appearance to corresponding habitats on the adjacent African continent.

Habitat data. The type specimen was taken while beating vegetation in a tract of spiny dry sclerophyllous forest growing on red sand soils just inland of the Mozambique Channel coast (for a more thorough review of this vegetative community see Rabesandratana, 1984). The dominant species here included baobabs (*Adansonia fony* Baillon), various succulent *Euphorbia* species, and octopus trees (*Didieria madagascariensis* Baillon). These formed a broken canopy, the understory of which was heavily overgrown with numerous types of dry deciduous shrubs. Most of these shrubs had leafed out and some were in bloom, due to the recent onset of the rainy season. The type specimen of *Magnocellus madagascariensis* was taken from one of the understory shrubs, but the capture was not noted until after departing the locality, thus a precise host association cannot be made. Although Isometopinae are thought to feed almost exclusively on scale insects (Ghauri and Ghauri, 1983), no scales were observed during our collecting.

Holotype. Female: MADAGASCAR, Tulear Prov., spiny forest 5 km N of Ifaty, 0–50 m, November 27, 1986, CL 2292, J. T. and D. A. Polhemus (USNM).

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